

**Abstract**

Method and device for the equivalence comparison of digital circuits

5

In designing digital circuits, the equivalence comparison has in recent years become the standard method for demonstrating the correctness of processing steps. Before the actual equivalence comparison can be performed,

10 however, signal-path identifiers have to be mutually assigned in various circuit descriptions in accordance with a second description format, wherein the circuit descriptions (4, 5) in accordance with the second description format have been generated by converting a

15 circuit description (1) in accordance with a first description format and the first description format has a higher abstraction level than the second description format. During said conversion, signal-path identifiers may disadvantageously be altered in such a way that an

20 assignment of the signal-path identifiers of two circuit descriptions (4, 5) in accordance with the second description format that have traversed different intermediate steps is no longer possible. According to the invention, provision is therefore made to generate

25 assignment information for assigning signal-path identifiers of circuit descriptions (4, 5) in accordance with the second description format also as a function of the circuit description (1) in accordance with the first description format, from which circuit description the

30 circuit descriptions (4, 5) in accordance with the second description format have been produced by conversion.

Furthermore, the circuit descriptions (4, 5) in accordance

with the second description format may be generated from the circuit description (1) in accordance with the first description format in such a way that the information content is not smaller in regard to the signal-path  
5 identifiers, with the result that the assignment of the signal-path identifiers in an equivalence comparison (6) is facilitated.

(Figure 1)